



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0710; Product Identifier 2018-NM-079-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. This proposed AD was prompted by in-service findings that a cotter pin at the main fitting joint of the nose landing gear (NLG) retraction actuator to the NLG strut showed evidence of shearing after a NLG retraction-extension cycling. This proposed AD would require revising the maintenance or inspection program, as applicable, a general visual inspection for damage of a certain cotter pin present on certain configurations of the NLG strut assembly and for the modification number shown on the identification plate for the NLG strut, and modification of the NLG retraction actuator hardware on any damaged NLG strut assembly. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0710; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527)

is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0710; Product Identifier 2018-NM-079-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2018-05, dated January 23, 2018 (referred to after

this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. The MCAI states:

There have been in-service findings whereby the cotter pin at the retraction actuator to nose landing gear (NLG) strut main fitting was observed to be damaged after a NLG retraction-extension cycling. This condition could lead to a loss of hardware and result in an actuator disconnect resulting in a failure to retract or extend, or in an undamped freefall of the NLG [which could adversely affect the airplane’s continued safe flight and landing].

This AD mandates a revision to the approved maintenance schedule. This AD also mandates a visual inspection of the cotter pin for certain configurations of NLG strut assembly, and if found damaged, the incorporation of a modification which introduces a new castellated nut, spacer, end plate and sleeve to the NLG retraction actuator to main fitting joint.

The required actions also include a prohibition on accomplishing Liebherr-Aerospace Service Bulletin 1285A-32-07 at any revision level on the NLG strut assemblies of any Bombardier, Inc., Model BD-700-1A10 or BD-700-1A11 airplane in order to prevent the installation of the affected configuration of the NLG strut assembly. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0710.

Related Service Information under 1 CFR part 51

Bombardier has issued the following service information, which describes procedures for a general visual inspection for damage of the cotter pin retaining the bolt that secures the main fitting joint of the NLG retraction actuator to the NLG strut and for the modification number shown on the identification plate for the NLG strut, and

modifying the attachment hardware that secures the NLG retraction actuator to the NLG strut. These documents are distinct since they apply to different airplane models in different configurations.

- Bombardier Service Bulletin 700-1A11-32-022, Revision 2, dated November 6, 2017.
- Bombardier Service Bulletin 700-32-035, Revision 2, dated November 6, 2017.
- Bombardier Service Bulletin 700-32-5011, Revision 2, dated November 6, 2017.
- Bombardier Service Bulletin 700-32-6011, Revision 2, dated November 6, 2017.

Bombardier has issued the following service information, which identifies airworthiness limitation tasks for restoration of the main fitting joint of the NLG retraction actuator to the NLG strut. These documents are distinct since they apply to different airplane models in different configurations.

- Task 32-33-01-111 of Bombardier Global 5000 BD-700 Time Limits/Maintenance Checks, Revision 19, dated November 13, 2017, for Bombardier Model BD-700-1A11 airplanes.
- Task 32-33-01-111 of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck – Time Limits/Maintenance Checks, Revision 9, dated November 13, 2017, for Bombardier Model BD-700-1A11 airplanes.

- Task 32-33-01-111 of Bombardier Global Express BD-700 Time Limits/Maintenance Checks, Revision 28, dated November 13, 2017, for Bombardier Model BD-700-1A10 airplanes.
- Task 32-33-01-111 of Bombardier Global Express XRS BD-700 Time Limits/Maintenance Checks, Revision 15, dated November 13, 2017, for Bombardier Model BD-700-1A10 airplanes.
- Task 32-33-01-111 of Bombardier Global 6000 GL 6000 Time Limits/Maintenance Checks, Revision 9, dated November 13, 2017, for Bombardier Model BD-700-1A10 airplanes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

This proposed AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired

in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (l)(1) of this proposed AD. The request should include a description of changes to the required actions that will ensure the continued damage tolerance of the affected structure.

Proposed Requirements of this NPRM

This proposed AD would require accomplishing the actions specified in the service information described previously.

Explanation of Service Bulletin Effectivity

Where Bombardier Service Bulletin 700-1A11-32-022 erroneously specifies “BD-700-1A10 aircraft” in paragraph 1.A, “Effectivity,” the effectivity should be Bombardier, Inc., Model “BD-700-1A11 airplanes” instead.

Costs of Compliance

We estimate that this proposed AD affects 60 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
4 work-hours X \$85 per hour = \$340	\$0	\$340	\$20,400

We have determined that revising the maintenance or inspection program takes an average of 90 work-hours per operator, although we recognize that this number may vary from operator to operator. In the past, we have estimated that this action takes 1 work-

hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), we have determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, we estimate the total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

We estimate the following costs to do the necessary on-condition action that would be required based on the results of any required actions. We have no way of determining the number of aircraft that might need this on-condition action:

Estimated costs of on-condition action

Labor cost	Parts cost	Cost per product
1 work-hour X \$85 per hour = \$85	\$10,487	\$10,572

According to the manufacturer, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all known costs in our cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Bombardier, Inc.: Docket No. FAA-2018-0710; Product Identifier 2018-NM-079-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category, serial numbers 9002 through 9638 inclusive and 9998.

(d) Subject

Air Transport Association (ATA) of America Code 32, Landing gear.

(e) Reason

This AD was prompted by in-service findings that a cotter pin at the main fitting joint of the nose landing gear (NLG) retraction actuator to the NLG strut showed evidence of shearing after a NLG retraction-extension cycling. We are issuing this AD to address this condition which could lead to a loss of hardware and result in an actuator disconnect and the NLG failing to retract or extend, or in an undamped freefall, which could adversely affect the airplane's continued safe flight and landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Maintenance or Inspection Program Revision

Within 30 days after the effective date of this AD: Revise the maintenance or inspection program, as applicable, to incorporate the information specified in Airworthiness Limitation (AWL) Task 32-33-01-111, "Restoration of the Nose Landing Gear Shock-Strut Assembly to Retraction-Actuator Main-Fitting Joint," as specified in the applicable time limits/maintenance checks (TLMC) manual identified in figure 1 to paragraph (g) of this AD, as applicable. The initial compliance time for doing the task is

at the time specified in the applicable TLMC manual listed in figure 1 to paragraph (g) of this AD, or within 30 days after the effective date of this AD, whichever occurs later.

Figure 1 to paragraph (g) of this AD – Acceptable Time Limits/Maintenance Checks Manuals

Airplane Models	Time Limits/Maintenance Checks (TLMC) Manual Number	Acceptable Revision Number	Date of Issue
BD-700-1A10	Bombardier Global Express BD-700 ("GL 700 TLMC")	Revision 28	November 13, 2017
	Global Express XRS BD-700 ("GL XRS TLMC")	Revision 15	November 13, 2017
	Global 6000 GL 6000 ("GL 6000 TLMC")	Revision 9	November 13, 2017
BD-700-1A11	Global 5000 BD-700 ("GL 5000 TLMC")	Revision 19	November 13, 2017
	Global 5000 GL 5000 Featuring Global Vision Flight Deck ("GL 5000 GVFD TLMC")	Revision 9	November 13, 2017

(h) Inspection and Modification

(1) Except for airplanes identified in paragraph (h)(2) of this AD: Within 6 months from the effective date of this AD, perform a general visual inspection for damage of the cotter pin retaining the bolt that secures the NLG retraction actuator to the

NLG strut, and a general visual inspection of the modification number shown on the identification plate for the NLG strut, and, if applicable, mark the correct modification number on the identification plate of the NLG strut, in accordance with the applicable Bombardier service information as shown in figure 2 to paragraph (h) of this AD. If damage to the cotter pin is present: Before further flight, perform the modification of the NLG attachment joint in accordance with the Accomplishment Instructions of the applicable Bombardier service information as shown in figure 2 to paragraph (h) of this AD.

(2) The actions specified in paragraph (h)(1) of this AD are not required for airplanes that do not have the NLG configuration specified in Paragraph 1.A, “Effectivity” of the applicable Bombardier service information as shown in figure 2 to paragraph (h) of this AD.

Figure 2 to paragraph (h) of this AD – Service Bulletins for Inspection and Modification

Airplane Model	Bombardier Service Bulletin	Date
BD-700-1A10	700-32-035, Revision 2	November 6, 2017
	700-32-6011, Revision 2	November 6, 2017
BD-700-1A11	700-1A11-32-022, Revision 2	November 6, 2017
	700-32-5011, Revision 2	November 6, 2017

(i) No Alternative Actions or Intervals

After the maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals, may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l)(1) of this AD.

(j) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information specified in figure 3 to paragraph (j)(1) of this AD.

Figure 3 to paragraph (j)(1) of this AD - Acceptable Temporary Revisions (TR) by Airplane Model

Airplane Models	TLMC Manual Number	Acceptable TR	Date of Issue
BD-700-1A10	GL 700 TLMC	TR-5-2-46	May 19, 2015
	GL XRS TLMC	TR-5-2-9	May 19, 2015
	GL 6000 TLMC	TR-5-2-13 and TR-5-2-14	May 19, 2015
BD-700-1A11	GL 5000 TLMC	TR-5-2-15	May 19, 2015
	GL 5000 GVFD TLMC	TR-5-2-13 and TR-5-2-14	May 19, 2015

(2) This paragraph provides credit for actions required by paragraph (h)(1) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraphs (j)(2)(i) through (j)(2)(viii) of this AD, provided that it can be confirmed that at least 25 NLG extension-retraction cycles had been completed on the NLG at the time of completion of the Accomplishment Instructions of the applicable service information specified in paragraphs (j)(2)(i) through (j)(2)(viii) of this AD; and provided neither the NLG nor the NLG retract actuator has been replaced or modified since the completion of the Accomplishment Instructions of the applicable service information specified in paragraphs (j)(2)(i) through (j)(2)(viii) of this AD.

- (i) Bombardier Service Bulletin 700-1A11-32-022, dated May 13, 2015.
- (ii) Bombardier Service Bulletin 700-1A11-32-022, Revision 1, dated August 26, 2015.
- (iii) Bombardier Service Bulletin 700-32-035, dated May 13, 2015.
- (iv) Bombardier Service Bulletin 700-32-035, Revision 1, dated August 26, 2015.
- (v) Bombardier Service Bulletin 700-32-5011, dated May 13, 2015.
- (vi) Bombardier Service Bulletin 700-32-5011, Revision 1, dated August 26, 2015.
- (vii) Bombardier Service Bulletin 700-32-6011, dated May 13, 2015.
- (viii) Bombardier Service Bulletin 700-32-6011, Revision 1, dated August 26, 2015.

(k) Service Information Prohibition

As of the effective date of this AD, no person may incorporate Liebherr-Aerospace Service Bulletin 1285A-32-07 at any revision level on the NLG strut assemblies of any Bombardier, Inc., Model BD-700-1A10 or BD-700-1A11 airplane.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office,

send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2018-05, dated January 23, 2018, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0710.

(2) For more information about this AD, contact Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on August 7, 2018.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

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